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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,215	10/20/2003	Mark J. Spath	89190.115003/DP-311086	4084

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EXAMINER	
ESHETE, ZELALEM	

ART UNIT	PAPER NUMBER
3748	

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/689,215	SPATH ET AL.
	Examiner	Art Unit
	Zelalem Eshete	3748

-- The MAILING DATE of this communication app ars on the cov r sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-12 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-12 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Church (6,196,175).

Church discloses a valve-deactivating hydraulic lifter for selectively coupling the rotary motion of a cam lobe to the reciprocal motion of a valve pushrod in an internal combustion engine (see figure 1), comprising: a) a lifter body having means for following an eccentric surface of said cam lobe and having a first axial bore and having a groove formed in a wall of said first axial bore, said groove being in communication with an oil gallery in said engine (see figure 2), b) a pin housing slidably disposed in said first axial bore and having at least one transverse bore and having a second axial bore (see figure 3; numerals 61,93); c) at least one locking pin slidably disposed in said at least one transverse bore said at least one locking pin having an outer end for selectively engaging said groove to lock said pin housing to said lifter body (see numeral 99); and d) a clocking mechanism for limiting relative rotation between said pin housing and said lifter body (see numeral 101).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3,5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Church.

Regarding claims 1,7,9: Church discloses a valve-deactivating hydraulic lifter for selectively coupling the rotary motion of a cam lobe to the reciprocal motion of a valve pushrod in an internal combustion engine, wherein oil is retained in the lifter during periods of engine shutdown (see figure 1), comprising: a) a lifter body having means for following an eccentric surface of said cam lobe and having a first axial bore and having a groove formed in a wall of said first axial bore, said groove being in communication with an oil gallery in said engine (see figures 1,2), b) a pin housing slidably disposed in said first axial bore and having a transverse bore (see figure 3; numerals 61,93) c) a locking pin slidably disposed in said transverse bore and each having an outer end for selectively engaging said groove to lock said pin housing to said lifter body (see numeral 99); and d) a clocking mechanism for limiting relative rotation between said pin

housing and said lifter body (see numeral 101). Church also discloses the lifter installed in the engine at an angle (greater than zero) from vertical (see figure 1).

Church discloses the claimed invention except for a pair of locking pins. It would have been obvious to one having ordinary skill in the art at the time the invention was made to duplicate the locking pin into a pair of locking pins, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.

Regarding claims 2,8: Church discloses a hydraulic lash adjustment mechanism disposed in a second axial bore of said pin housing and including a seat for receiving an end of said pushrod, wherein said hydraulic lash adjustment mechanism includes a chamber for holding oil, and wherein said pin housing includes an oil supply port in communication with said chamber (see figure 2), and wherein said clocking mechanism causes said oil supply port to be facing upwards when said lifter is installed in said internal combustion engine at an angle greater than zero degrees from vertical (see figure 1).

Regarding claim 3: Church discloses the clocking mechanism comprises: a) a recess formed in one of said pin housing and said lifter body (see figure 2); b) a longitudinal groove formed in the other of said pin housing and said lifter body (see figure 1; numerals 103,105); and c) a locking element disposed in said recess and said groove and extending there between (see numeral 101).

Regarding claim 5: Church discloses the clocking mechanism as an integral part of the locking pins and further discloses the clocking mechanism comprises a port formed through a wall of said lifter body and a locking element disposed in said port (see figure 2).

Church discloses the claimed invention except for failing to disclose the clocking mechanism separate from the locking pin and thus fails to show a flat formed on the outer surface of the pin housing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to separately form the clocking/locking device, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman, 168 USPQ 177, 179.*

Regarding claim 6: Church discloses the locking element is selected from the group consisting of a pin and a spring clip (see figure 2).

3. Claims 1-3,5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Church in view of admitted prior art.

Regarding claims 1,7,9: Church discloses a valve-deactivating hydraulic lifter for selectively coupling the rotary motion of a cam lobe to the reciprocal motion of a valve pushrod in an internal combustion engine, wherein oil is retained in the lifter during periods of engine shutdown (see figure 1), comprising: a) a lifter body having means for

following an eccentric surface of said cam lobe and having a first axial bore and having a groove formed in a wall of said first axial bore, said groove being in communication with an oil gallery in said engine (see figures 1,2), b) a pin housing slidably disposed in said first axial bore and having a transverse bore (see figure 3; numerals 61,93) c) a locking pin slidably disposed in said transverse bore and each having an outer end for selectively engaging said groove to lock said pin housing to said lifter body (see numeral 99); and d) a clocking mechanism for limiting relative rotation between said pin housing and said lifter body (see numeral 101). Church also discloses the lifter installed in the engine at an angle (greater than zero) from vertical (see figure 1).

Church fails to disclose more than one (a pair) locking pin.

The prior art teaches a pair of locking pins (see figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Church's system by providing a pair of locking pins as taught by the prior art in order to balance the engagements.

Regarding claims 2,8: Church discloses a hydraulic lash adjustment mechanism disposed in a second axial bore of said pin housing and including a seat for receiving an end of said pushrod, wherein said hydraulic lash adjustment mechanism includes a chamber for holding oil, and wherein said pin housing includes an oil supply port in communication with said chamber (see figure 2), and wherein said clocking mechanism causes said oil supply port to be facing upwards when said lifter is installed in said

internal combustion engine at an angle greater than zero degrees from vertical (see figure 1).

Regarding claim 3: Church discloses the clocking mechanism comprises: a) a recess formed in one of said pin housing and said lifter body (see figure 2); b) a longitudinal groove formed in the other of said pin housing and said lifter body (see figure 1; numerals 103,105); and c) a locking element disposed in said recess and said groove and extending there between (see numeral 101).

Regarding claim 5: Church discloses the clocking mechanism as an integral part of the locking pins and further discloses the clocking mechanism comprises a port formed through a wall of said lifter body and a locking element disposed in said port (see figure 2).

Church discloses the claimed invention except for failing to disclose the clocking mechanism separate from the locking pin and thus fails to show a flat formed on the outer surface of the pin housing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to separately form the clocking/locking device, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman, 168 USPQ 177, 179.*

Regarding claim 6: Church discloses the locking element is selected from the group consisting of a pin and a spring clip (see figure 2).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Church in view of Voigt (5,544,628).

Church discloses the claimed invention as recited above and further discloses the locking element is a piston (see figure 2).

Church fails to disclose the locking element is a ball.

However, Voigt teaches a ball is an equivalent locking element to that of a piston (see column 2, lines 20 to 25).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Church's system by providing a ball as an equivalent locking element as taught by Voigt in order to use various equivalent means of locking elements.

5. Claims 10,11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Church in view of Connell (4,739,675).

Church discloses the claimed invention as recited above; however, fails to disclose the engine is a slant mount engine or a V-style engine.

Connell discloses valve lifter for V-style (slant mount) engine (see figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the valve lifter of Church in that of V-type engines as

taught by Connell in order to apply the valve lifter to various engine types.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Church in view of prior admitted prior art as applied to claim 3 above; and further in view of Voigt (5,544,628).

Church in view of admitted prior art discloses the claimed invention as recited above and further discloses the locking element is a piston (see figure 2).

Church in view of admitted prior art fails to disclose the locking element is a ball.

However, Voigt teaches a ball is an equivalent locking element to that of a piston (see column 2, lines 20 to 25).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Church in view of admitted prior art's system by providing a ball as an equivalent locking element as taught by Voigt in order to use various equivalent means of locking elements.

7. Claims 10,11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Church in view of admitted prior art as applied to claim 8 above; and further in view of Connell (4,739,675).

Church in view of admitted prior art discloses the claimed invention as recited above; however, fails to disclose the engine is a slant mount engine or a V-style engine.

Connell discloses valve lifter for V-style (slant mount) engine (see figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the valve lifter of Church in view of admitted prior art in that of V-type engines as taught by Connell in order to apply the valve lifter to various engine types.

8. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Haas et al. (US2002/0038642).

Admitted prior art discloses a valve-deactivating hydraulic lifter for selectively coupling the rotary motion of a cam lobe to the reciprocal motion of a valve pushrod in an internal combustion engine, wherein oil is retained in the lifter during periods of engine shutdown (see figures 1,2), comprising: a) a lifter body having means for following an eccentric surface of said cam lobe and having a first axial bore and having a groove formed in a wall of said first axial bore said groove being in communication with an oil gallery in said engine (see numeral 12), b) a pin housing slidably disposed in said first axial bore and having a transverse bore (see numeral 18); c) a pair of opposed locking pins slidably disposed in said transverse bore and each having an outer end for selectively engaging said groove to lock said pin housing to said lifter body (see numeral 54).

Prior art fails to disclose a clocking mechanism for limiting relative rotation between said pin housing and said lifter body.

However, Haas teach a "clocking mechanism" for limiting the relative rotation between the inner housing and outer housing body in order to assure a circumferential positional correspondence between bores (see page 2, paragraph 0015).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of the prior art by providing a anti-rotational "clocking mechanism" as taught by Haas in order to assure a circumferential positional correspondence between oil grooves.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zelalem Eshete whose telephone number is (703) 306-4239. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (703) 308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Zelalem Eshete
Examiner
Art Unit 3748

Z

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